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NOTES ON BIRDS OF REGIONS WITH PRIMITIVE PRAIRIE CONDITIONS.¹

BY T. L. HANKINSON.

THE birds of the prairies of the Central United States appear to have been given little attention with reference to their relations to the conditions that existed in these prairies before they were broken by the plow and before their ponds or sloughs were drained. But a few remnants of these old prairie features now exist, and these are chiefly along railroads, and streams, in short strips or in small patches, or they are found in small undrained areas in the midst of cultivated fields. These latter are commonly spoken of as prairie ponds or sloughs. It is their bird life that will be treated in this paper.

Three of these ponds are located in the writer's tramping ground and are within five miles of Charleston, Coles County, Illinois. Another one, near Hillsboro, Montgomery County, Illinois, was visited last May. These four are the only prairie ponds whose bird life the writer has examined. They vary in size from about one to ten acres. All have the following conditions in them: standing water during wet seasons and an almost complete covering of vegetation, usually with a marked zonal arrangement. In each pond there are one or more growths of the willow and cottonwood trees, the latter commonly predominating. The tree growths form centers about which are very distinct zones of thick willow bushes. Outside of these, in the two largest of the four ponds, are irregular and broken zones characterized by rushes (*Scirpus robustus*) and flags (both *Acorus* and *Iris*) in separate patches in the zone. The outermost zone of each pond is of thick grass and other low herbage with scattered growths, in some of the larger ponds, of low buttonbushes (*Cephalanthus*). Four distinct regions can, therefore, be distinguished in these ponds, which are: (1) the cottonwood-willow center, (2) the

¹ Read before the Wilson Ornithological Club, Dec. 29, 1915, Columbus, Ohio.

willow-shrub zone, (3) the rush-flag zone, and (4) the grass-buttonbush zone.

Not only are the plants of each of these areas different, but also their animals and physical features. They vary as to the amount of water present. This never is deep. In the largest pond, near Charleston, it is seldom much more than a foot. The bottom soil of the Charleston ponds is everywhere of hard, stiff, black clay. Since these four zones are fairly distinct bird habitats, the birds of each will be considered separately. The data will be collected in annotated lists.

BIRDS OF THE COTTONWOOD-WILLOW CENTER.

Butorides virescens virescens—Green Heron. Noted on May 27, 1912, when a nest was found nine feet up in a cottonwood. It was composed of sticks mostly about a foot in length and put together in a loose manner, making the nest a flimsy structure. It contained three eggs.

Zenaidura macroura—Mourning Dove. Frequently seen in this wooded area.

Melanerpes erythrocephalus—Red-headed Woodpecker. Seen on one occasion about the cottonwoods.

Colaptes auratus luteus—Northern Flicker. A nest found seven feet up in a willow stub on May 21, 1914.

Corvus brachyrhynchos brachyrhynchos—Crow. One seen on a nest about thirty feet up in a large cottonwood on April 15, 1915.

Agelaius phoeniceus phoeniceus—Red-winged Blackbird. The birds frequently alight in the trees, and in the early spring companies of males, sometimes large with a hundred or more birds, sing from the treetops.

Sturnella magna magna—Meadowlark. One noted singing from the top of a cottonwood on April 15, 1914.

Euphagus carolinus—Rusty Blackbird. A small company of them was singing from the cottonwoods on April 16, 1913.

Quiscalus quiscula aeneus—Bronzed Grackle. Frequently seen in the trees.

Planesticus migratorius migratorius—Robin. A large company of robins seen about the cottonwoods on April 15, 1915.

Sialia sialis sialis—Bluebird. A few noted about the trees, and an old nest, in all probability that of the bluebird, was found in a tree cavity.

BIRDS OF THE WILLOW SHRUB ZONE

Tyrannus tyrannus—Kingbird. Seen May 21, 1914.

Agelaius phoeniceus phoeniceus—Red-winged Blackbird. Seven nests of this species were found in the willow zone of a small pond near Charleston on May 21, 1914. This had but three of the plant areas, a cottonwood-willow center, the willow bush zone, and a grass zone without buttonbushes upon it. The latter might have furnished good concealment for nests of redwings, but there was no evidence of nests there. The seven nests were all situated in the thickest part of the willow growth and were from about five feet to eight feet up. They were very similar in size, approximating 5x5 inches on the outside and 3x3 inches on the inside. The contents of five examined contained from three to six eggs. Dead grass and plant fibres were the chief materials in their composition.

Icterus spurius—Orchard Oriole. One seen in the willow zone on May 21, 1915.

Quiscalus quiscula aeneus—Bronzed Grackle. A nest found in one of the willows on May 27, 1912, about seven feet up. It was a bulky structure seven inches high and contained two half grown young birds.

Spizella monticola monticola—Tree sparrow. A few seen among the willows in January, 1914.

Spizella pusilla pusilla—Field Sparrow. Several seen September 4, 1914.

Dumetella carolinensis—Catbird. One seen here September 4, 1914.

Toxostoma rufum—Brown Thrasher. Noted May 21, 1914, and September 4, 1914, in this zone.

BIRDS OF THE RUSH-FLAG ZONE

Ixobrychus exilis—Least Bittern. One flushed May 23, 1915, in the pond near Hillsboro.

Tympanuchus americanus americanus—Prairie Chicken. One flushed from the dead rushes April 15, 1915. At this time the ground in the rush area was dry.

Agelaius phoeniceus phoeniceus—Red-winged Blackbird. Rushes were used to some extent by this species for nesting, but they prefer to place their nests in bushes. On May 27, 1912, much searching revealed only one nest in the rush region. This was about a foot above the shallow water and contained three eggs.

BIRDS OF THE GRASS-BUTTONBUSH ZONE

Botaurus lentiginosus—American Bittern. One flushed from this zone on April 23, 1911.

Rallus elegans—King Rail. A nest found in this zone on May 23, 1915, in the form of a pile of dead grass on the ground about ten inches in diameter and five inches high. It contained twelve eggs. The nest was poorly concealed by grass and a few small buttonbushes.

Rallus virginianus—Virginia Rail. One flushed from the grass of one of the ponds near Charleston on April 16, 1913.

Agelaius phoeniceus phoeniceus—Red-winged Blackbird. The buttonbushes that grow in this zone are favorite nesting places for these birds, and when these plants are present in one of these ponds, few nests can be found elsewhere in it. On May 27, 1912, eight nests were found in these bushes, placed from one to three feet up in them, and each contained from one to four eggs or young birds. On May 23, 1915, a number of nests were found in buttonbushes of the grassy area of the pond near Hillsboro; they were from two to four feet up and each had from one to four eggs or young.

Besides the species above listed, there were a number seen about these ponds that appeared to have been attracted by their features, but according to my observations, they were not intimately associated with any set of conditions in them, and hence could not be referred to any one of these zones or sub-habitats. An annotated list of these species will here be given.

Pisobia maculata—Pectoral Sandpiper. A few were seen about a pool in a cultivated field a few feet from one of the ponds near Charleston on April 16, 1913.

Helodromas solitarius solitarius—Solitary Sandpiper. One of these also seen about the pool close to the margin of one of the ponds on April 16, 1913.

Oxyechus vociferus—Killdeer. Seen in field close to the margin of one of the Charleston ponds.

Colinus virginianus virginianus—Bob-white. Flushed close to the margin of one of these ponds. No doubt they obtain shelter in them at times.

Accipiter cooperi—Cooper's Hawk. One flew over the pond apparently attracted by the many red-wing blackbirds there at the time.

Circus hudsonius—Marsh Hawk. One flushed from one of the ponds near Charleston on October 30, 1912.

Junco hyemalis hyemalis—Slate-colored Junco. Many close to one of the ponds in a hedge fence.

Geothlypis trichas trichas—Maryland Yellow-throat. Frequently heard about these prairie ponds.

The observations recorded in this paper were obtained during about a dozen short visits to these prairie ponds, and it is hoped that they are adequate to give those unfamiliar with these habitats a general idea of their bird life and to stimulate field work in these regions by those who find them accessible, for they constitute a type of habitat that is rapidly disappearing. In the Charleston region, one was destroyed during the last few months, and corn was raised this last summer where it existed. Many of the trees and bushes have been cut from the others and the grass zones much narrowed on account of their being dry during ploughing time this last spring.

It is regrettable that there were not bird students among the pioneers of the prairie region of the Central United States, who studied the birds of the old and extensive prairie ponds or sloughs, not only in a faunistic way, but in an ecological way, describing in detail the bird habitats and the relation of the birds to the various features in them, and who recorded these observations in scientific publications. The only literature the writer has yet been able to find on the old prairie region near Charleston is in a popular account of the History of Coles County, Illinois, by C. E. Wilson.¹ He tells of many sloughs found in the region just north of Charleston about 1861, some of which were a quarter of a mile across, with water three to five feet in depth. Brief references to their plant life make it appear that they had vegetal features quite similar to their small remnants, but the fauna of the old prairies certainly was very different from these little areas with similar vegetal and hydrographic conditions that we now find. He writes of "migratory water fowl" that came in "count-

¹ Munsell Publishing Co., Chicago.

less thousands," some remaining to breed, namely several species of ducks, wild geese, cranes, and swans. From Robert Ridgway's account in 1873 (American Naturalist, Vol. 7, pages 197-203) of the birds of a piece of prairie near Olney, Illinois, one gets an impression of the large and wonderful bird fauna that parts, at least, of the prairie area of Central Illinois must have had. He recorded ninety-five species of birds in a short time, including some species that are very scarce or apparently absent in the part of the country at the present time, such as black terns, Mississippi kites, swallow-tailed kites, ravens, yellow-headed blackbirds, and the two marsh wrens.

SUMMARY AND CONCLUSIONS

The plants of these prairie ponds have a more or less evident zonal arrangement, and each zone has a distinct bird fauna, but many more observations than those recorded in this paper are needed, before their faunas are well understood.

The writer, during some dozen visits to these areas during the last five years, found twenty-five species of birds in them and five others in their immediate vicinity.

Some other species, very probably found in these regions, are: short-eared owl (*Asio flammeus*), screech owl (*Otus asio asio*), cowbird (*Molothrus ater ater*), migrant shrike (*Lanius ludovicianus migrans*), myrtle warbler (*Dendroica coronata*), and other warblers. People living near these ponds say that wild ducks and geese come to them, often in large numbers, during some springs when there is considerable water in the ponds.

Six species of birds were found breeding in these places, and there is plenty of evidence that others were breeding there also. Red-wing blackbirds found conditions for nesting especially favorable there. They showed a strong preference for bushes instead of high grass or rushes or other herbaceous plants for nesting purposes. Buttonbushes were evidently preferred to willows. Water birds seem to use these ponds little for nesting, although they visit them freely during their migrations.

The birds that were found in these small unbroken prairie areas are chiefly of species that live in woodlands, including shrubby growths, but only a small proportion of the species of the woodland birds of the Charleston region appear to visit the prairie ponds. Some marsh birds are found in them. The true open field birds treat these areas as they do woodlands, avoiding them almost entirely. Upland plovers, horned larks, dickcissels, savanna sparrows, and grasshopper sparrows, all of which are common in the Charleston region, gave no indication of being attracted by these ponds.

Since these areas of undrained prairie land constitute a distinct type of bird habitat with a fauna having some semblance to that of the old prairie sloughs and since they are rapidly being destroyed, ornithologists, who find them accessible for field work, should strive to preserve data on the bird inhabitants of these and other remnants of the primitive prairies.

Charleston, Ill.

THE TERNS OF WEEPECKET ISLANDS, MASSACHUSETTS.

BY ALVIN R. CAHN.

DURING the summer of 1903 and 1904, Professor Lynds Jones had the opportunity of watching and studying the colony of terns (*Sterna hirundo* and *S. dougalli*) in the vicinity of Woods Hole, Massachusetts, and the results of this study were given to the public a couple of years later.¹ As Professor Jones does not confine his remarks to any one special colony, it may be taken for granted that his observations will hold for one island he investigated as well as for another. Among the islands he visited was the small group of three known as the Weepeckets, located about four miles off the coast of Woods Hole. Eleven years have elapsed since Professor Jones investigated these islands, and it is evident from obser-

¹ Jones, L., "A Contribution to the Life History of the Common (*Sterna hirundo*) and Roseate (*Sterna dougalli*) Terns." *Wilson Bull.*, Vol. XVIII, No. 2, June, 1906, pp. 35-47.